What is claimed is:

1. A method for promoting the healing of damaged tissue in a patient in need of such treatment, comprising:

exposing the damaged tissue, which is surrounded by an air impermeable wound cover, to an effective amount of gaseous nitric oxide for a period of time that exceeds eight consecutive hours; and

allowing at least a portion of the gaseous nitric oxide to contact the air adjacent to the air impermeable wound cover through the air impermeable wound cover.

2. The method of claim 1 wherein the damaged tissue is selected from the group consisting of muscle, ligament, tendon, skin, and bone.

3. The method of claim 1 wherein the damaged tissue is damaged by surgical incisions, trauma, and pathological processes.

4. The method of claim 1 further comprising healing the damaged tissue by recruiting inflammatory cells, followed by fibroblasts to the damaged tissue.

5. The method of claim 1 wherein the air impermeable wound cover is transparent and allows for permeation of small molecules, while simultaneously preventing microbial invasion.

6. The method of claim 1 wherein effective amount of gaseous nitric oxide ranges from 20 - 1000 ppm.

7. The method of claim 1 further comprising pretreatment step of cleaning and scrubbing the damaged tissue.

8. The method of claim 1 further comprising pretreatment step of exposing to a wound healing agent other than gaseous nitric oxide.

9. The method of claim 1 further comprising pretreatment step of exposing the damaged tissue to an agent in combination with gaseous nitric oxide in order to enhance its effectiveness and/or absorption.

10. The method of claim 1 further comprising posttreatment step of wetting, dampening or moistening the damaged tissue following gaseous nitric oxide therapy.

11. The method of claim 1 further comprising posttreatment step of applying a wound healing agent in combination to gaseous nitric oxide therapy.

12. The method of claim 1 further comprising posttreatment step of exposing the damaged tissue to an agent in combination with gaseous nitric oxide in order to enhance its effectiveness and/or absorption.

13. The method of claim 1 further comprising the administration of exogenous nitric oxide gas to tissue flap and surrounding damaged area in order to promote flap viability and increase local blood flow to donated tissue.

14. A method for promoting the healing of damaged tissue in a patient in need of such treatment, comprising:

spraying, from a spray container, the damaged tissue with an effective amount of gaseous nitric oxide; and

allowing the gaseous nitric oxide to contact the air adjacent the damaged tissue.

15. A method for promoting the healing of damaged tissue in a patient in need of such treatment, comprising:

exposing the damaged tissue, which is surrounded by an air impermeable wound cover, to an effective amount of gaseous nitric oxide for a period of time that exceeds eight consecutive hours.

16. A method for promoting the healing of damaged tissue in a patient in need of such treatment, comprising:

exposing the damaged tissue, which is surrounded by an air impermeable wound cover, to an effective amount of gaseous nitric oxide and other gases which contain ox ygen for a period of time.